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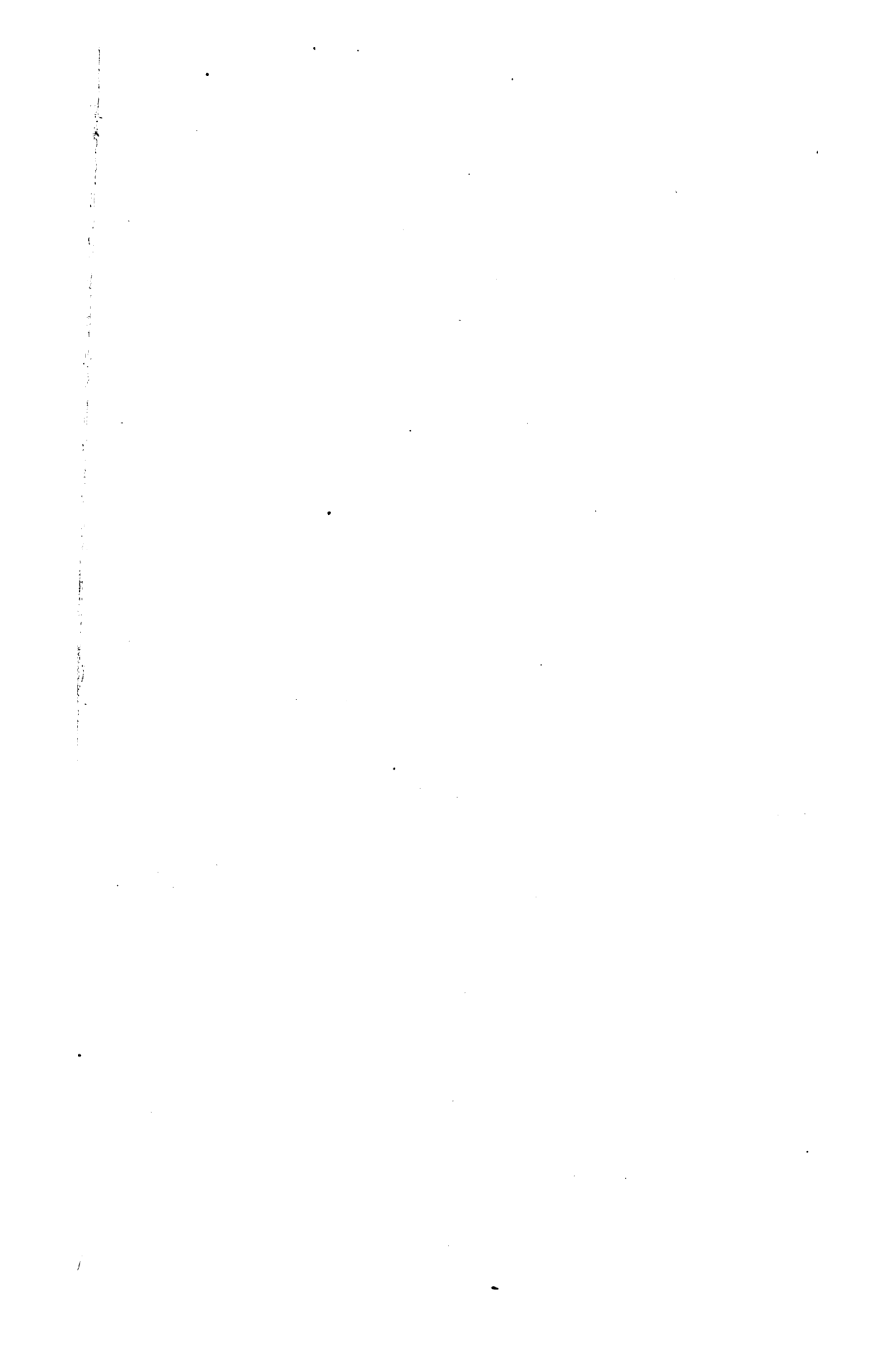
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On the Theory of the Origin
of Species
by Natural Selection -
By
John Crawford.

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ON THE THEORY
OF
THE ORIGIN OF SPECIES

BY
NATURAL SELECTION

IN THE STRUGGLE FOR LIFE

BY
JOHN CRAWFURD, ESQ. F.R.S

[PRIVATELY PRINTED]

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1868

ORIGIN OF SPECIES BY NATURAL SELECTION.

I PROPOSE in this Paper to state, in so far as concerns the natural history of Man, such objections to the Darwinian theory as have occurred to me, and which oblige me to refuse my belief in opinions which have received the assent of many eminent men of science. In doing so, I hope I shall be found to state them in those terms of respect and deference which are justly due to them and more especially to the ingenious, accomplished, and candid author of the theory.

The Darwinian theory was suggested by the well-known difficulty of determining in plants and animals what it is that constitutes a species when many species so closely resemble others as to seem but mere varieties. Hence it has been inferred that, in the course of countless ages, a small number of crude types, through a process of beneficial natural variations, have been transmuted into the many species into which the organic world is now divided. The object of the theory is to demonstrate that the whole organic creation did not, as geological evidence would seem to show, originate in a series of cataclysms, but, on the contrary, had its source in causes gradually and continuously in action, and differing in no respect from those at present in actual operation. This view supposes all organised beings to be derived from a few, or even from one progenitor or prototype. 'I cannot doubt,' says Mr. Darwin, 'that the theory of descent by gradation embraces all the members of the same class. I believe that animals have descended from

at most only four or five progenitors, and plants from an equal or even lesser number.' He is, indeed, disposed to go further than this, and to derive all organised beings whatsoever from a single progenitor. Here, however, he judges from the analogous structures and chemical composition of all plants and animals, but admits that analogy may be an unsafe guide, and so the number of the progenitors of the theory may be reckoned at from eight to ten.

But what, it may well be asked, are these progenitors or prototypes? for these words are but generic terms, which convey no notion of size, form, or quality. We must, in fact, consider them as atoms or monads of unappreciable minuteness—not visible even by the solar microscope; in truth, nothing better than 'such stuff as dreams are made of.'

The theory supposes that from the hypothetic progenitors in question—the origin of which it is as impossible for the human mind to conceive as the origin of the universe itself—have descended all living things, from the smallest infusorial animalcule up to the elephant, the whale, and man himself. These mighty results are to be attained through the preservation of 'favoured races in the struggle for life;' that is, by a perpetual sequence of profitable variations in every species of plants and animals. The profitable variations, however, which the mutations produce, are so slow, so minute, and so unappreciable that the hypothesis demands millions of years for their accomplishment; an assumption which, as it is unsupported by any fact, places it at once beyond the reach of human investigation, relegating it to the realm of imagination.

Authentic history certainly affords no evidence in favour of the theory of beneficial mutation by natural selection. The wild and even the domestic animals of Egypt have undergone no change in times of an antiquity which has been variously estimated at from 5,000 up to 10,000 years. In the Egyptian catacombs have been found mummies of the ibis and the kestrel hawk, not differing in a feather, or the spot of a feather, from these birds of Egypt of the present day. The ox, the

ass, the dog, and the goose represented on the Egyptian monuments of equal antiquity, are the same varieties which exist now. If, then, thousands of years have produced no change at all, it is reasonable to believe that, except in dreams, millions would be equally inoperative.

If the living beings of the present earth afford no evidence in support of the theory of transmutation by natural selection, neither do those which lie buried in the earth's crust; and this is, indeed, fully admitted by the ingenious author of the theory himself. 'Why,' says he, 'does not every collection of fossil remains afford plain evidence of the gradation and mutation of the forms of life?' and he adds, with a candour which is natural to him, 'we meet with no such evidence, and this is the most obvious of the many objections which may be urged against my theory.' The answer to the objection is, that 'the geological record is imperfect.' The imperfection, however, seems to amount to no more than that the record affords no evidence whatever in favour of the theory of mutation by natural selection, while it is perfect enough in an opposite direction, showing that the lowest forms of life came first into existence, and were followed by a successive series of improvements, ending with man.

As to 'the struggle for life,' there is no doubt but that, through all living beings, it is the weak that perish and the vigorous that survive. Nature in some cases takes some pains for preserving the integrity of the species, but never for its improvement by mutation. Thus, with some gregarious animals, the vigorous males, to the exclusion of the young and feeble, are the fathers of the flock or herd. At the beginning, according to the theory of natural selection, there could have existed no 'struggle for life,' when a few monads, imperceptible by the microscope, had the whole earth to themselves.

Nature, no doubt, supplies us with wonderful mutations of form and character, but they bear no analogy to those ascribed to the Darwinian theory, which are more extravagant than the metamorphoses of Ovid. The tadpole turned

into a frog, the caterpillar into a butterfly, and a maggot into a bee, are wonderful mutations, but nothing in comparison with those which suppose eight or ten nameless atoms to have peopled the land and the waters with all their varied forms of life. To bear any resemblance to the transformations of the Darwinian theory, the frog ought at least to be transformed into a crocodile, the butterfly into a dove, and the bee into a falcon or eagle.

The arguments in support of the theory of natural selection are, of course, chiefly derived from the varieties which occasionally arise in plants and animals; and this part of his subject Mr. Darwin has elaborated with the great skill and ingenuity of a most accomplished naturalist, who has travelled far and studied long. The objections which here present themselves are obvious. Variation in the wild or natural state of plants and animals is rare and evanescent, and can in no case, as far as I know, be shown to result in improvement, or what Mr. Darwin calls 'profitable variation.' It is only in the cultivated state of plants and the domesticated state of animals that variation is frequent; that is, after plants and animals have been long subjected to the control and direction of man. Even then it is but a small number of both that undergoes variation at all. The variety which takes place, therefore, under man's direction ought not to be taken into account at all, because, if the theory be true, variation must have been rife for millions of years before man existed, the geological record, the true history of these countless ages, affording no evidence of it.

But, even in plants and animals which undergo variety under man's control, there is a vast difference in the degree in which they do so, even when we are tolerably sure that the wild sources are the same species. Thus, the variety which the blue rock pigeon and the Indian jungle fowl undergo is endless, while the ass, the two camels, hardly vary at all. Even when variety takes place it ought, as Mr. Darwin expresses it, to be a profitable one to the individual; that is, be such

an improvement as shall enable it to survive its cotemporaries in the 'struggle for life.' But it turns out to be the very reverse of this. Plants and animals may gain in those qualities which make them most useful or agreeable to man, but they lose those properties which enable them best to maintain the struggle for life. Our poultry lose, for the most part, the power of flight. The domestic ass, when well cared for, increases in size, but no longer possesses the fleetness of the ass of the desert. The jungle fowl of India is a small bird, but vigilant, shy, and powerful of wing; while the domestic bird is large, heavy, and dull, and, if turned into the woods of its native country, would unquestionably perish from incapacity of feeding and defending itself.

Mr. Darwin has given special attention to the breeding of the blue rock pigeon, the only species of its numerous family which is amenable to domestication, and which sports into varieties. These varieties seem to be indefinite in their amount, for besides the more usual sorts, distinguished chiefly by colour, we have such varieties as tumblers, runts, fantails, barbs, pouters, and carriers. Not one of these can be said to have any superior advantage over the wild blue pigeon in so far as regards capacity to maintain the struggle for life, and some of them are of such defective formation that they would surely perish were man's care withdrawn. Moreover, the varieties produced by domestication are not permanently profitable to the individual, as the progressive theory would have us to understand; for it has been ascertained that when the common house pigeon joins the wild birds its peculiarities are, in a short time, absorbed in the mass of the primitive stock; whereas, had the variation been advantageous, it ought, according to the theory, to have been heritable, displacing the wild bird.

It is the same with cultivated plants as with domesticated animals; they gain in size and acquire properties useful or agreeable to man, but they lose in capacity to maintain the struggle for existence. Some of them, such as the cultivated

rose, the banana and the pine-apple, lose the power of propagation by seed, that is, become virtually sterile, and but for man's care would perish. Domesticated animals and cultivated plants are, in short, but feeble competitors with their wild congeners, and ought not to be quoted as profitable mutations, to say nothing of the non-existence of such varieties for the millions of years which preceded man's first appearance, and during which the theory, were it true, must have been in full operation.

One might have expected that the theory of development by natural selection would, instead of four or five progenitors for animals, and the same, or even a less number for plants, have amounted to a number at least equal to that of their respective natural orders. This would at least have dispensed with the necessity which now exists of imagining such violent and seemingly miraculous transitions as, for example, the growth, in due time, of a mushroom into an oak, or of a sponge into a whale.

The theory makes no provision for disparities of climate, or for the geographical distribution of plants and animals as they now exist, frequently independent of climate. On the contrary, it supposes every plant and animal of land and water to have sprung from eight or ten invisible and indescribable progenitors, which in this case must be imagined to achieve distant migrations; which we know to be impossible to their most fully developed descendants—even to man himself until within the last few generations.

The theory of natural selection by profitable variation of species of course supposes indefinite improvement. For the present, the transmigrations have had their climax in man; but if the theory were true, it ought, after the lapse of a period of time equal in length with that which has transpired since a monad became a man, to produce a being twice as highly gifted as the existing race of mortals. The theory, however, is supposed to terminate in absolute perfection; but why, if the principle of development be well founded, it should ever end at all, is not explained. What, then, does absolute perfection

consist in? To form any conception of it is beyond human understanding, and even the imagination can but form a dim and vague notion of it. The Buddhist doctrine of the metempsychosis cuts the matter short by supposing supreme happiness to consist in absorption into the essence of the Deity, after a long series of transmigrations beginning with a worm, and rising to the dignity of a white elephant and a king—a solution which is probably as intelligible as Dr. Johnson's definition, which makes perfection an attribute of the Deity; which is but getting rid of an insuperable difficulty by taking refuge in the imagination. Even the Buddhist euthanasia would provide only for the highest members of the scale, leaving the rest of living creation to pursue the struggle for life until the turn of all came, when the earth would, of course, be without inhabitants.

A great geologist and naturalist, Sir Charles Lyell, fancies that he sees in the origin and development of languages a corroboration of the Darwinian theory.* The hypothesis on which this view is founded is of recent German origin, and supposes languages, like the prototypes of the theory—the development of species by natural selection—to have been originally few in number, and that from these few have come the multitude of tongues now found to exist, and which have existed in every authentic period of history. The very reverse of this hypothesis is the fact, and it is not in the nature of things that it should be otherwise. The framing of a language is an operation as factitious as the fashioning of a club, the kindling of fire, or the conversion of a stone into a cutting instrument. When man first appeared he was as destitute of articulate speech as he was of these objects, the mere works of his hands and brain; and he had to compose a language, at first rude and scanty, corresponding with the paucity of his ideas, as he had to fabricate rude tools and weapons.

Languages, instead of being few in number, must have been

* 'The Geological Evidences of the Antiquity of Man, with Remarks on the Origin of Species.' By Sir Charles Lyell, Bart., F.R.S.

originally numerous; and for this obvious reason, that man at his first appearance, in his then ignorance and helplessness, must have been thinly scattered over the face of the earth; and this in small tribes or communities, so as to enable them to obtain food. In that early stage men must have been ignorant of each other's very existence, or, if one tribe knew another, its knowledge would extend only to its nearest neighbour, and then only in the quality of an enemy, contending with it in a genuine struggle for life, that is, for a bare subsistence. Each isolated tribe had to frame its own language, and hence a multiplicity of independent tongues was inevitable. Accordingly, in proportion as we approach to the rude primitive state of society, to which I am now referring, independent languages are found to be numerous, while they become fewer in proportion as we recede from it.

The illustration, then, which the origin and history of language is supposed to give the Darwinian theory, is simply a mistake, and is not a whit more to the purpose than would be the origin of the use of flints for cutting instruments, or of clay for vessels.

In further support of the Darwinian theory, it has been taken for granted that no language—at least no European language—has continued a living tongue beyond one thousand years; the object in this case being to show that languages, like organic species, are subject to transformation. I am satisfied that the alleged fact is groundless. A language expresses the ideas of the social condition of the people who speak it; and if that condition be stationary, the language must continue a living tongue, not for one thousand years, but for ever. Thus the languages of the Australians had reached the highest mark which those of a people could possibly have attained whose land yielded no plant for cultivation, no animals for domestication—who held no intercourse with strangers from whom they could have derived benefit—and who, moreover, were among the lowest types of mankind. A people in such a condition being doomed savages, their languages would ne-

cessarily represent the ideas of savages only ; and they may have been in the condition they were in, when first observed by civilised man, not for a thousand but for thousands of years.

It is not necessary, however, that a people should be savages labouring under insuperable privations, in order that language should be nearly stationary and of long endurance. The Arabs of the age of Mahomed were barbarians, but not savages. They were already in possession of a copious, and therefore an ancient language, and the Koran is still considered good Arabic, although written twelve centuries ago. Modern Greek is known to differ from the Greek of the Homeric poems only in the loss of a few inflections ; so that the duration of Greek may be reckoned at some threefold the length of time theoretically allotted for duration of a living language.

It is conquest by strangers alone that, by substituting their own tongue for a native one, puts an end to a living language. It by no means always does so even then. It has not done so in certain parts of Britain, Ireland, France, and Spain ; and there can be no good reason for not concluding that the native languages now spoken in Ireland, in Wales, in Brittany and in Galicia, may not have been the languages of the time of the Roman conquests, or, indeed, that they may not even then have been ancient languages—the primitive tongues of the inevitable savages who first constructed them. The support, then, which the theory of development receives from the history of language, we may safely conclude, is purely illusory.

There is one argument against the theory of natural development by variation which seems to me to be fatal to it. This consists in the existence of the parasites of plants and animals. These are of inferior organisation to the beings on which and through which they live. They must, therefore, have been either cotemporaneous or posterior creations to the bodies to which they must owe their existence, and as such, either equal or superior developments, instead of being always inferior ones. Why is the misletoe or the fungus of inferior organisation to the trees to which they owe their

lives? Being either cotemporary creations or more recent developments, they ought to have been more perfect organisations. If man was the last and most perfect emanation of the Darwinian theory, the parasites which trouble him, which are never seen without him, and which are ever most numerous as we approach to the time of his first appearance, being coeval with or of later creation than himself, ought to be his superiors. The theory of progressive mutation by natural selection in the struggle for life could surely not have been in action when organisations of the highest and lowest quality came into existence, at best, at one and the same time.

I come now to consider that branch of my subject which more directly connects the Darwinian theory with ethnology, that which makes the races of Man to proceed from the family of Apes. In bodily form, at least, there is a seeming approximation, but on examination it will soon be seen that the discrepancy is far more striking than the similitude. The most highly endowed ape, in fact, far less resembles man than a hog does an elephant, or a badger a bear. The disparities are, indeed, unspeakable in their extent. In all essential respects, apes are quadrupeds, and nothing better. Nature furnishes them spontaneously with food and clothing, and they continue their race in the same way as all other terrestrial mammals. A monkey can walk on his hind legs, but his pace is shambling; it costs him an effort to walk, and he has to balance himself to preserve his equilibrium. He stands on his hind legs more easily than a dog, but not better than a bear, and his more natural movement is on all-fours like that of any ordinary quadruped, and his most natural is climbing.

All the species of apes are exclusively frugivorous, but all the races of man are omnivorous. The abode of man is the stable earth, but of apes the forest. Were there no trees there would be no apes, and, in fact, in treeless regions they have no existence. Man, of one race or another, is the denizen

of every climate; spread, with trifling exceptions, over every part of the firm earth. The family of apes, on the contrary, is restricted to tropical and subtropical regions, provided they be wooded. Yet not even in all such are they found, for there are extensive well-wooded tropical regions wholly destitute of them. Thus they do not exist in the Molucca Islands, in the great island of New Guinea, in any of the many islands of the North and South Pacific Ocean, or in the tropical part of the continent of Australia. Man, then, is the denizen of the whole habitable earth, and apes, his imagined progenitors, only of a small and peculiar portion of it. It should follow from this distribution of the two parties that apes could not have been the progenitors of men unless apes possessed the power of overcoming geographical obstacles insurmountable by man himself while a savage or a barbarian.

Apes vary in size from the magnitude of a marmot to that of a wild boar, but no such disparity exists in the races of man. The greater number of apes have long tails, and the American monkeys prehensile tails, but in all the races of man the termination of the spine is concealed in flesh. The monkeys of Africa, Asia, and the Asiatic Islands have the same number of teeth with man, but the monkeys of America have four additional ones.

Throughout all the various races of man the union of the sexes is followed by a fertile hybrid offspring, but between the different species of apes no union of the sexes takes place at all, even where the species seem most closely allied; so that in this respect they differ more from man than several species of the other lower animals, such as all dogs and some oxen.

The brain of the apes has been deemed by anatomists to make a nearer approach in form and structure to that of man than the brain of any other animal. But the intellectual fruits are not commensurate with this physical resemblance. The ape is brisk, but fitful, artful, and prone to mischief. In sober sagacity he is inferior to the dog and to the elephant;

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indeed, even to the hog. Monkeys may be tamed, but cannot, even in countries of which they are denizens, be domesticated; so that in this respect they rank, not only below all our domestic cattle, but even below our ordinary poultry. In this last regard, it may be added, that they bear no likeness to man, who even as a savage is a domesticated creature.

The apes are incapable of storing knowledge, and, like ordinary brutes, are one and the same from generation to generation. Is there not in the brain of man and of the lower animals something too subtle for anatomy ever to reach? No one alleges that there is any difference in the material properties of the brain of the sagacious and faithful dog and that of the gluttonous and untameable wolf, or in that of the cunning and untameable fox. Anatomy detects no difference in the brains of the docile horse, the wilful ass, or of the zebra incapable of domestication. The brain of a man is not by anatomy distinguishable from that of a woman, although the intellect of man be usually superior to that of woman, while many women far excel the generality of men. No anatomist, I presume, would assert that the brain of Newton could be distinguished by its form or structure from that of an illiterate peasant, or even from the brain of a savage that could count no higher than the fingers of one of his own hands.

The theory of development by profitable variation makes the family of apes the nearest approach to the variation which ends in man: but it is silent about the gradations in the apes themselves; and there are above a hundred distinct species of them, not one of which is common to Africa, America, Asia, and the Asiatic islands.

The nearest approach to man, however, is asserted to be found in what are called the anthropoid or man-like monkeys; chiefly, it may be presumed, because like man they have no tails, for it would be difficult to discover any better reason. The anthropoid apes are four in number, and in the order of precedence given to them they are as follows: the gibbon, the chimpanzee, the orang-utan, and the gorilla. But even

these are not man-like in the order here set down; for the two first, which in external form bear the least resemblance to man, are by far the most intelligent, while the two last, which make the nearest approach to him, are by far the stupidest; the gorilla, which stands nearest to man, being surpassed in intelligence by many a little monkey with a tail a yard long.

The chimpanzee and gorilla are African apes, so that Africa had two progenitors, a clever and a stupid one. The gibbon is an ape of continental Asia, so that throughout the whole of that great continent, and for its manifold races of man, there was but one progenitor. The Asiatic islands had two—the gibbon and the orang-utan; or rather three, for it is ascertained that there are two distinct species of the latter. America has no anthropoid monkey at all, so that, to people America and its islands with human beings, the gibbon of India, or the orang-utan of Borneo, had to cross the Atlantic—a feat which their savage and barbarous descendants, after attaining the human form by natural selection, were never able to achieve. The people of Europe, who had no monkeys in their own country, must trace their simian pedigree to the nearest country; and thus Greeks, Romans, Germans, Frenchmen, and Englishmen would have the same immediate progenitors as Egyptians, Berbers, Negroes, Abyssinians, and Hottentots, and they have to choose between a chimpanzee and a gorilla. Australia, like Europe, had no ape at all; but as its native inhabitants are among the lowest types of mankind, it ought surely to have had an inferior anthropoid to itself, to show how near a man might be to a monkey.

A skilful anatomist and eloquent teacher, embracing the theory of gradual mutation, has published a work to show the connexion which he considers to exist between man and the ape.* In this work pictured figures of the skeletons of man and the four anthropoid apes are given, in which the

* 'The Evidences as to Man's Place in Nature.' By Thomas Henry Huxley, F.R.S., 1863.

apes as well as the man are represented as standing erect. It would have been more consonant with nature if the apes had been represented as going on all-fours, and, better still, had they been shown in the act of climbing a tree, or hanging from one of its branches. While Professor Huxley, as a supporter of the Darwinian theory, considers the anthropoid apes—the gorilla at the head of them—as the nearest approach to man, he fully admits that a wide gulf separates them; and, with the candour of a genuine philosopher, he thus expresses himself on the subject: ‘Let me take this opportunity of directly asserting that the differences are great and significant—that every bone of the gorilla bears marks by which it may be distinguished from the corresponding bones of a man, and that in the present creation, at any rate, no intermediate link bridges over the gap between man and the troglodytes.’ ‘No one,’ he adds, ‘is more convinced than I am of the vastness of the gulf between civilised man and the brutes, or is more certain that, whether from them or not, he is assuredly not of them.’

But let us for a moment indulge in the belief that the Darwinian theory has, through the creation of a being or beings superior to apes, but inferior to man, bridged over the chasm which now separates them, and that the masterpiece of organic existence is at length reached; still man is but a generic term, for he is divided into many races, or, speaking more correctly, into many species, greatly differing among themselves in bodily and mental attributes. It was incumbent, therefore, on the theory to show that such differences were brought about by ‘natural selection in the struggle for life,’ and to indicate with which of the many races the mutation began; or, in other words, which of the races it is that stands nearest to the apes. It makes no attempt of the kind; it simply makes a man out of a monkey and of something else as yet unknown, leaving mankind an indiscriminate hodge-podge; and so, therefore, the Darwinian theory, except in so far as it provokes enquiry, is of no value to ethnology or the natural history of man.

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ON THE

MALAYAN RACE OF MAN

AND

ITS PREHISTORIC CAREER.

BY

JOHN CRAWFURD, ESQ., F.R.S.

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THE MALAYAN RACE.

THE Malayan race is the prevailing one in the Malay and Philippine Archipelagos, or from the 19th degree of north to the 10th degree of south latitude, and from the 95th to the 135th degree of east longitude. Its home is an insular region throughout, and its islands have been computed at no fewer than 6,000, including some of the largest in the world.

The physical form of the Malayan race of man may be briefly described. It is of short stature, the average height of the male sex not exceeding five feet three inches, which would be four inches short of that of Europeans. The face is lozenge-shaped, with a flat forehead, high cheekbones, a prominent large mouth, and thin lips. The hair of the head is always black, coarse, lank, and abundant. The hair of every other part of the person, the beard included, is very scanty. The skin is soft, and of a brown colour of various shades, but never black. The lower limbs are heavy, and the whole person squat and deficient in agility.

In this attempt to describe the physical characteristics of the Malayan race, I take no account of the form of the skull, because I am thoroughly satisfied that the most skilful craniologist would not be able to distinguish it from the skull of a Chinese, of a Tartar, of an Esquimaux or, indeed, of any other race of man having a low-bridged nose.

The only considerable deviation from the type thus described is to be found in the nude inhabitants of the many isles which lie between Celebes, on one side, and New

Guinea and the continent of Australia on the other. Within these bounds we find a different race, with which the stature and the general physical form is the same as with the Malayan race, while the complexion is darker and the hair of the head, although not woolly, is frizzly and not lank. The difference between them and the usual Malay type is not, perhaps, greater than that between the various nations of Europe or different tribes of the Red man of America, or different tribes of African Negroes.

It was for the modification of the Malayan race thus described, that the late learned Dr. Prichard invented one of the two new varieties of man which he added to the five original ones of Blumenbach, his other added variety being the Hottentot. The new variety and the name he gave to it were mistakes. The latter is variously written—Alfora, Alafora, Arafora, and Halafora. Dr. Prichard supposed it to be modifications of a native term, but it happens to be Portuguese, composed of the Arabic articles *al* or *el*, and the preposition *fora*, without; and was simply a general denomination given by the Portuguese, when they were supreme in the Moluccas, to all the native inhabitants who were out of the pale of their own authority. This was the same thing as creating a new race out of the *Indios bravos*, or native American tribes independent of the Spanish authority.

The Malayan race of man is found to be in very different social conditions, varying with the opportunities of advancement possessed by the different tribes and nations composing it; some being mere nomadic savages, while others have made a respectable progress in the useful arts, and are possessed of letters, their own invention.

The condition of society in the Malay and Philippine Archipelagos bore no inconsiderable resemblance to that of America and its islands, when both were first seen by civilised man. In each the race of man was nearly the same throughout, the greater part of both regions being inhabited

by savage or rude men, while a more advanced civilisation was restricted to a few favoured choice localities. Languages too, were proportioned in extent, probably as numerous in the Asiatic Archipelagos as in America itself. By far the greatest progress, however, had been made in the Asiatic Archipelagos, for their advanced nations had discovered iron and letters, and both Malays and Javanese were, in all respects, far in advance of Mexicans and Peruvians. At the same time, nature was more propitious to the Malaysians than to the Americans, for it supplied them with a greater variety of valuable products for cultivation, and with more valuable animals for domestication; while it gave them the benefit of an intercourse with strangers more advanced than themselves, an advantage from which the most favoured Americans were wholly excluded.

But these were not the only advantages which the Malaysian race possessed over the American. While the greater portion of America was a great continent difficult to traverse, the region inhabited by the Malaysian race consisted of sea-girt islands, which, by favour of the periodical winds, could be ranged to and fro without serious difficulty. It followed from this, that while the distant nations of America were found ignorant even of each other's existence, the productions of one portion of the Malaysian region were interchanged, and even one language adopted for intercommunication.

At first view, it might seem that the Columbian Archipelago, Antilles with its large and fertile islands, would have proved a field of social development similar to that of the Asiatic islands; but such was not the case. The reasons are obvious. Like the continent, and in a greater degree, the islands were deficient in the vegetable and animal products which minister to the advancement of civilisation. They possessed but one cereal and no pulse, and their inhabitants had to subsist on the meaner foods of roots and fruits; and they had no animal amenable to domestication, whether for food or for labour. Besides these disabilities, the American islands

wanted the periodical winds, which gave facility to the infant navigation of the Asiatic islanders. The result was that, while productions, language, arts, and even religion, were widely disseminated among the Asiatic islanders, the people of the American islands were generally ignorant of each other's existence, and had not yet invented 'the sail,' familiar even to the islanders of the Pacific Ocean.

The main causes which have promoted social progress with the Malayan race, consist of fertility of soil, including abundance of water for irrigation,—open land unencumbered with forest, and access to water-communication. Those which have obstructed development are the converse of these—sterility of soil, imperfect command of water for irrigation, and land covered with a forest, the disencumbrance of which would be impossible to the feeble efforts of man in his early attempts at advancement. To these causes may be added, communication with strangers in a more advanced stage of civilisation than the native inhabitants.

These causes have given rise to the various phases of social condition which prevail over the two Archipelagos. Where the inauspicious conditions have been in operation, the race will be found little, if at all, above the savage state; while under the more auspicious, a considerable measure of civilisation has been reached, that measure being in proportion to the advantages possessed by the respective localities.

The possession of written language, wherever it occurs, as an independent indigenous invention, may be considered as marking the highest civilisation which has been reached in a specific locality. The invention of written language, always, with the Malayan race, alphabetic and syllabic, and in no instance symbolic, has been made only in large islands, and never in small ones—not even in large ones wanting the favourable conditions which I have indicated. It has been, in fact, confined to three islands of the Malay Archipelago, and to one of the Philippine—namely, Java, Sumatra, and Celebes for the first, and Luçon for the last. There is

no evidence of alphabetic writings having ever been invented in the great islands of Borneo, Mindano, or in the Malayan Peninsula, all of them forest-clad lands deficient in fertility. Some of the people of the smaller islands, however, it should be noticed, have adopted the inventions of their larger neighbours. Thus, the people of Bali and Lombok have adopted the alphabet of Java, the islands of Bouton, Muna, and Salayar the alphabet of Celebes, and the most considerable islands of the Philippine Archipelago the alphabet of Luçon.

Java, besides its current alphabet, appears to have invented others which are now obsolete, and the existence of which is known only by ancient inscriptions. In Sumatra no fewer than four separate alphabets were invented, independent of that in which the Malay language was written, before it was superseded by adapted Arabic letters on conversion to Mahomedanism. The island of Celebes produced but one alphabet, and the great island of Luçon also but one.

The invention of writing may be considered satisfactory evidence that the localities in which it took place possessed pre-eminent natural advantages. Among these favoured localities—from which improvement, to a greater or less extent, has been disseminated, not among the tribes of the Malayan race alone, but by silent means to distant and strange races of men far beyond the limits of the Archipelagos—Java is the most remarkable example, and I shall briefly describe the character of this fine island. It is about half the size of Britain, and of volcanic formation throughout. It is long in proportion to its breadth, so that no part of it is remote from the sea. A mountain backbone runs through its whole length of 700 miles, the peaks of which (all either active or dormant volcanos) rise to heights ranging from 6,000 to 12,000 feet. This great range, precipitating the rain of passing clouds, produces abundant perennial streams, which, watering the rich alluvion of the plains, valleys, and

mountain acclivities, makes Java one of the most fertile countries in the world.

In the favoured land of Java, then, there arose an independent indigenous civilisation, the highest yielded by the Malayan race. Immemorially, the Javanese have cultivated one cereal of the first class, several cereals of an inferior kind, pulses, roots, and good fruits, and been in possession of all the domestic animals known to continental Asia, save the ass and camel, unsuited to their country, and the elephant, which is not a native, and could not well have been imported. Of equal antiquity is their knowledge of pottery made by the lathe, of textile fabrics, of the precious metals, of iron, and of tin. With the exception of a very small number of exotics, all the objects now enumerated are expressed by native terms, or at least by names which are most naturally traced to the Javanese language, as their native origin.

The Javanese language is the most copious of all the insular tongues, and, independent of what it has received from foreign sources, contains a considerable body of native literature. It consists of three divisions,—the vernacular; a factitious dialect employed, orally and in writing, by inferiors addressing superiors, much like the ceremonial language ascribed to the ancient Aztecs; and an ancient tongue, existing only in a few manuscripts, or in inscriptions on stone and bronze, and now obsolete. These divisions of language are written in various modifications of the same alphabet, one which is perfect for its own purpose, since it has a character for every sound in the language; while differing, as it does, in form and in arrangement, from every other known alphabet, it may safely be pronounced a native invention.

The Javanese, like the Hindus, have no authentic ancient history, but their language bears internal evidence of their civilisation being both ancient and indigenous. Their chronology cannot, indeed, be carried back further than the end

of the twelfth century (A. D. 1195), but at that time their ancient language had been formed; and this contains evidence of a state of society similar to that which existed when the Javanese, at the beginning of that century, became first known to the wide world—and such, indeed, in a great measure, it still continues. The terms connected with the arts are, with rare exceptions, expressed in words of the native language; and this may, I think, be admitted to be satisfactory evidence of an indigenous civilisation.

Although, however, Javanese civilisation be substantially of native growth, it is not without obligations to strangers, and the greatest are due to the Hindus. These converted the Javanese to a superficial Hinduism, at a remote but unknown time. Hindu monuments, chiefly in the form of temples, images, and inscriptions, testify to the prevalence of the Hindu worship and of Hindu art, but they do not carry us, authentically, beyond six-and-a-half centuries back. Language affords not only far better evidence of this connection with Hinduism, but also of the antiquity of Javanese civilisation. The proportion of Sanscrit words in the modern written language of Java is not less than 10 in 100, and it is still greater in the obsolete ancient tongue, known as the Kawi. Of this ancient tongue, at least one-fifth part is, at present, obsolete. The loss of so large a portion of a language could not have taken place except in a long course of ages, especially when we take into account that the people concerned are Asiatics, ever slow to change, while the change in this case was the result, not of conquest, but of persuasion and example. The stranger apostles who effected the conversion were, in fact, few in number, and far away from their own country, and hence powerless for the exercise of force.

Besides the Sanscrit which is found in the Javanese, it also contains some words of Arabic, introduced through the conversion of the people of Java to the Mahomedan religion, an event which took place in the last quarter of the fifteenth century (A. D. 1478); together with a few words of the

Telinga or Telugu, the language of that nation of Southern India which had traded immemorially with the Malayan Islands, and who were found to be thus employed when the Portuguese made their first appearance in the waters of the Archipelago in the beginning of the sixteenth century (A. D. 1509).

It must be considered satisfactory evidence of the civilisation which arose in Java, that when the Javanese were first seen by intelligent Europeans, who had the capacity to render a sensible and truthful account of their condition, they were a people not only far in advance of the most improved of the islanders of the Pacific, but greatly superior even to the Mexicans and Peruvians, the most cultivated people of the New World. The evidence for this is that their agriculture was such as to enable them not only to feed a dense population, at home, with a cereal of the highest class, but to furnish some of these neighbours with a superfluity of it. They furnished their neighbours, at the same time, with works in the metals, and with textile fabrics.

In the region inhabited by the Malayan race, as in other parts of the world, the number of languages, in its several parts, will be found few in the inverse proportion to the density of population. This is the result of the amalgamation of many primordial tribes by a predominant one, ending in a single nation with one tongue. Java is pre-eminent in this respect, for although the number of its inhabitants is, probably, greater than that of all the rest of the Malay region put together, its languages are but two in number; and these, although independent tongues, are much intermixed. One of them is the medium of speech of the great majority of its inhabitants, and these occupying the largest and fairest portion of the island.

The second in rank of the insular civilisations is that of the Malays, and this had its primeval seat in Sumatra, an island three times the size of Java, and by one-half larger than Britain; yet the greater part of it is covered by a

deep primeval forest, and its few prairies are deficient in fertility. Its favoured portion is confined to a broad volcanic band which passes through the island, and several of the peaks of which attain the height of 10,000 feet, and are active volcanos. This small portion is well-watered, contains large lakes, and is not inferior in fertility to Java; while it has the advantage of communicating with the sea, to the north and east, by rivers far surpassing, in size and length of course, those of Java. The volcanic band in question was the hive of the Malayan civilisation, which is of an inferior type to the Javanese, and which, from difference of physical geography, took generally a more diffusive expansion. The Malays have cultivated the same plants, domesticated the same animals, and practised the same arts as the Javanese, much intercourse taking place between them as immediate neighbours, a fact to which a frequent intermixture of language bears testimony. With a narrower field of enterprise at home, and greater facilities of foreign adventure, they issued from their native seat, and became renowned as rovers, traders, and colonists. In common with the Javanese, they were found, when both nations became first effectively known to the civilised world, conducting the internal carrying-trade of the two Archipelagos from one extremity to the other. Besides this, they planted colonies in countries near to them, and formed settlements in more distant ones: of the first of which we have examples on the northern coast of Sumatra itself, on the coasts of the Malayan Peninsula, and on the coasts of Borneo—and of the last as far as the far Philippines.

The wide diffusion of the Malay people has materially conduced to the wide spread of their language, which has been immemorially the common medium of intercourse between the various nations of the two Archipelagos; but the character of the language itself has largely contributed, for it is a tongue eminently simple in structure, soft in sound, and facile of pronounciation.

The Malay language wants those evidences of an ancient culture which belong to the Javanese. It has no ancient recondite tongue, and, beyond a few words and phrases, no ceremonial dialect; neither has it any ancient literature. The foreign nations who have contributed to promote the indigenous civilisation of the Malays are the same as have done so to that of the Javanese, and the most important contribution has in this case also been made by the Hindus, although in a less degree. While the remains of Hinduism, in the shape of temples and inscriptions, are numerous and conspicuous in Java, they are rare and unimportant in Sumatra, and indeed, it may even be suspected that they have come indirectly from Java. The Malay language bears the same testimony, for while the Javanese contains about 10 Sanscrit words in every 100, the former contains not more than half this proportion. The Malay however contains, at least in the written tongue, a larger proportion of Arabic words. The Malays, indeed, were the first among the islanders to adopt the Mahomedan religion, which always implies more or less of the language in which that religion was promulgated; and the migratory Malays may be considered to have been, from its first introduction, its chief promulgators.

There is much in common between the Malay and Javanese civilisations, not the result of conquests by either nation (for of this there is neither record nor internal evidence), but of the silent intercourse of many ages, encouraged by vicinity and an easy maritime communication.

Although there be much in common between the Malay and Javanese languages, it should be observed of these two tongues—and the same observation holds good of all the other languages of the tribes and nations of the Malayan race—that they are essentially different and distinct languages. Three-fourths of the words of the Malay and Javanese are wholly different, and these include all that class of words which are indispensable to the construction of a complete sentence, while they do not include any foreign words. The structure of the Javanese and the Malay is, no doubt,

simple, and such is the case also with the many tongues of all the people of the Malayan race; but the simplicity is in each case peculiar to itself. The great body of each language may, in fact, be considered the primeval tongue of the rude tribe that framed it, while the additional portion has been the result of a tribal intercourse of many ages.

The influence of the two civilisations which I have now sketched—the Javanese and Malay—has been widely spread over the tribes and nations of the two Archipelagos, and they have, moreover, mutually acted on each other. Thus it will be found, on a comparison of the Javanese and Malay languages, that about one-fourth of their vocabularies are essentially the same, while the remaining three-fourths are peculiar and original.

In Sumatra, besides the Malayan civilisation, the dominant one, there are four others—namely, the Achih or Achin, the Batak, the Rejang, and the Lampung—the three last having each of them its own peculiar and separate alphabet: that of the Achin, like the Malay, has been superseded by the Arabic. The influence, however, of these minor civilisations has never extended beyond the narrow bounds of the people speaking their native idioms, and therefore need not be further considered.

Next in rank to the Malay and Javanese civilisations is that which sprang up in the great island of Celebes. The special seat of this civilisation, as civilisation, is defined by the discovery of written language in the south-western of the four peninsular-like wings into which this oddly-shaped island is divided. The people with whom it originated are those speaking the language which they themselves call the Wugi, and Europeans (taking the name from the Malay version of the word) term Bugi, which with an European plural becomes Bugis. This is also the name of the people themselves. The Bugis, as a people, are at least equal in progress to the Malays, but, like them, have none of the evidences of an ancient civilisation which distinguish the Javanese. They are, at present, the most enterprising of the native

nations of the two Archipelagos, and conduct that inter-insular trade which was in the hands of the Malays and Javanese when the Malayan Archipelago became first known to Europeans. This revolution in their social condition is, however, it should be added, of comparatively very recent date; for they are hardly noticed in early European narratives, and have evidently made a great advance in the three centuries and a half which have elapsed since they were first mentioned.

The Bugis alphabet differs in form, and in a great measure in the power of its letters, from all the other alphabets of the Archipelago, and indeed, as far as I know, from all foreign alphabets. It has, in fact, every characteristic of a local independent invention. The language which it represents is also peculiar. It is, indeed, of very simple structure, without inflexions, the words following each other in the natural order of ideas. Every syllable and every word must end in a vowel, the only exceptions being nasals and aspirates, the result of which is the disfigurement of nearly all foreign words naturalised in it—in some cases to such a degree that they are with difficulty recognised.

I may here remark that the Bugis alphabet, in common with most of the other insular alphabets, takes the organic classification of the Hindu alphabets, or is arranged according to the parts of the organs of speech chiefly engaged in their pronunciation—as into labials, dentals, palatals, gutturals, sibilants, and liquids. This order, however, seems to have been established after the invention of the alphabets themselves, and in imitation, directly or indirectly, of the Hindus, in the same manner as it was borrowed by the dialects of Southern India from the alphabet in which the Sanscrit language is usually written. It does not apply to the Batak, the rudest of the Malayan alphabets, nor to the Javanese, the most perfect, for both of these have rejected the innovation,—the first, perhaps, because the people who used it were incapable of appreciating its merits; and the last,

most probably, because they did not find it expedient to depart from their own long-established order, however arbitrary.

Besides the Bugis, two other nations of Celebes—the Macassar and Mandar—speaking separate languages, have attained a considerable amount of civilisation; and these have adopted the Bugis letters, as have done also the people of Bouton, Salayar, and Sumbawa, although there is evidence to show that the people of the last of these islands once possessed a native alphabet of their own, eventually superseded by that of Celebes. Beyond these, however, and the settlements which the Bugis nation has made in the small islands in their neighbourhood, and on the eastern side of the island of Borneo, in the Malayan Peninsula, and in the British settlements in the Straits of Malacca, the Bugis language has had no such wide diffusion as the Malay and Javanese languages, although an isolated word peculiar to it may, now and then, be found in the great Polynesian language of the Pacific, and even in the language of Madagascar.

I come, finally, to the lowest and feeblest of the insular civilisations. This, as already indicated, had its origin in the great island of Luçon, and it is believed with the Tagala nation, one of the four more advanced people of that island. While the Malayan Archipelago has given birth to many alphabets, obsolete or living (in all probability not fewer than ten), the Philippine Archipelago has produced one only, and this a very rude character. As evidence of the crudeness of this solitary alphabet, I may mention that while the Javanese has twenty consonant characters and five vowel marks, and even the alphabet of Celebes consists of sixteen consonant characters and four vowel marks, the Philippine alphabet contains no more than thirteen consonant characters and three vowel marks. One consonant character represents the letters *d* and *r*, and another *f* and *p*, while a dot above a consonant represents alike the vowels *e* and *i*, and one below it equally *o* and *u*.

The island of Luçon, the seat of the civilisation to which I am referring, is nearly twice the size of Ireland—is for the

most part of volcanic formation—contains mountains of great elevation, many of them active volcanos—and abounds in considerable rivers and lakes, while its soil is of eminent fertility. Notwithstanding these signal advantages, the most advanced of its inhabitants, when first seen by Europeans (which was a quarter of a century after the discovery of the New World), were of a much lower social status than the Malays and Javanese; and, indeed, they owed a good deal of the improvement to which they had reached to their intercourse with both these nations.

With a land as auspicious as that of Java, and in some respects even superior to it, and far more so than that of Sumatra, the civilisation which arose in Luçon ought to have been at least equal to that which arose in Java and Sumatra; and why it was inferior may, I think, be accounted for by some privations or natural obstacles which contravened its seeming advantages. The people of Luçon and the other islands of the Philippine Archipelago had domesticated the dog, the hog, the goat, the common fowl, and the duck; and in this regard had some advantages over the American nations, yet they were but a shade better off than the South Sea islanders. All the larger quadrupeds fit for effective labour, and possessed by the people of Java, Sumatra, and even of Celebes, were absent; the feeble navigation of the Malayan islanders could not supply them; none of them were indigenous, and it remained for Europeans to introduce the ox, the buffalo, and the horse. Then, again, the Philippines, far away from the Hindus, who aided in the civilisation of the Malays and Javanese, gave no direct assistance to the Philippine islanders; and perhaps, besides distance, the rougher seas which encompass the Philippines may have proved a discouragement to the resort of strangers.

The Tagala alphabet is the rudest of all the writings of the two Archipelagos, and a Spanish writer describes it as 'very easy to learn, but very difficult to read.' It has been adopted by several of the other nations of the Philippines—

by all, indeed, pretending to any measure of civilisation; and this embraces the nations speaking the Bisaya language, including the inhabitants of the most considerable islands, such as Panay, Negros, and Zebu—all fertile and productive, though in a less degree than Luçon.

The Philippine languages have a character peculiar to themselves, and are all of comparatively simple structure, although the simplicity is not carried so far as in the Malay, Javanese, or languages of Celebes; for there is a considerable amount of inflexion in the personal pronouns, and even in the verb. It is especially different from those languages in its phonetic character, containing combinations of sounds which a Malay or Javanese could hardly pronounce, and which, at all events, never occur in their languages. As to the character in which the Philippine languages are written, I may further say of it that its letters differ, in form and powers, from all the alphabets of the Malayan Archipelago—the Tagala alphabet having, in short, every mark of a rude native invention.

It has been already shown that the highest civilisation attained by the Malayan race originated in the two great islands of Sumatra and Java, and with the people speaking the Malay and Javanese languages. It has also been shown that a considerable portion of these two languages is common to them, yet these words include none indispensable to the construction of a complete sentence—a fact which shows that the common terms are the result of the intercourse of many ages, or that they are adventitious, leaving the two languages separate, original, and independent tongues. The same may, indeed, be said of all the other languages of the Malayan region, and within the wide bounds of which there can hardly be, proportioned to extent, fewer than in Africa and America. Such a thing as a dialect, in the sense of the division of a language, does not, I may add, exist.

The influence of the two higher civilisations—the Malayan and Javanese—has been felt by all the nations and tribes of the Malayan race, being naturally greater in proportion to

facilities of intercourse, and diminishing with distance or other obstacles to it. The foreign or extra-insular words contained in the two most cultivated tongues, it should be observed, are always found to accompany them in the ruder language, and this in the same form, and with the same meaning.

The words which convey most clearly the extent of the benefits which the two most civilised peoples have conferred on the less advanced are those connected with the ordinary arts—such as the names of tools, weapons, utensils, and clothing, the names of domesticated animals and cultivated plants, terms connected with agriculture, navigation, and trade, and those relating to government and the division of time, with the system of numeration. With a few exceptions, and with some variations of orthography, the words which denote the objects thus enumerated are the same in the two leading languages.

Two or three examples of the proportion in which the two leading languages have been infused into the minor ones, may be given. The language of the Sundas, a people of Java, divided from the proper Javanese only by an arbitrary line of demarcation, contains in *1,000 words only 400 of native origin, while the remaining portion consists of Malay, and more especially of Javanese, with their foreign ingredients. Thus only two-fifths of its aboriginal tongue remains to the Sunda. The language of the island of Madura—separated from Java by a strait little more than two miles broad in its narrowest part, and which had been usually ruled by Javanese princes—contains even a smaller aboriginal element, for three-fourths of it are composed of Malay or Javanese, including the stranger elements of these tongues.

The proportion of the two main languages to be found in the Balinese, the language of the small but fertile and populous island of Bali, divided from Java by a very narrow strait, is far larger than in the Sunda and Madurese; for in 1,000 words it contains 550, leaving, therefore, less than one-half of this language aboriginal.

Among the wild tribes of Borneo the most advanced, numerous, and powerful are the Kayans, and of their language, about 1,000 words contain 110 belonging to languages that are not Bornean; and of these 35 are exclusively Malay, and 6 exclusively Javanese, while the numbers common to the two languages amount to 83, leaving 4 which are Sanscrit or Arabic.

In the Bugis, or most cultivated and diffused of the languages of Celebes, the foreign words introduced amount, in 1,000, to 233, leaving the great body of the language an original tongue. The Bugis language, I may here observe, would seem to have exercised an influence over the other languages of Celebes and those of the adjacent islands, similar to that which the Malay and Javanese have exercised over the languages of the nations adjacent to Java and Sumatra; and I consequently find that in the language of the Macassar nation, the most advanced of the people of Celebes after the Bugis and their immediate neighbours, one half is the same as that of the latter people.

The proportion of the two main languages of the Malayan race found in the cultivated tongues of the Philippines decreases with distance from Java and Sumatra. In the Pampango, the language of one of the most advanced nations of the great island of Luçon, it is 63 words in 1,000; in the Tagala it is only 24; and in the Bisaya, the prevailing tongue of the lesser islands of the Archipelago, it is nearly the same, or about 23.

The Sanscrit words, which in greater or less number exist in nearly all the many languages of the Malayan race, demand some special notice. These words are genuine Sanscrit, with hardly any admixture of the vernacular languages of Southern India, that land from which emanated the men who introduced them. They are, moreover, received into the Malayan languages with as much integrity as to sound as the imperfect insular alphabets would allow. From this the presumption is that they were not introduced by

conquest, since in that case they would have been communicated orally, and hence in a corrupted form. Indeed, there can be no doubt but that they were wholly introduced through the medium of the religion of the Hindus, and hence, without doubt, in a written form.

The Sanscrit element was first introduced into the nearest islands to the country of the Hindus, and which were also in all other respects the fittest to receive it, by superior fertility of soil and more advanced social condition. This is further attested by the greater numbers in which Sanscrit words are found in the Malay and still more in the Javanese language, and their decline as we recede from the localities of these tongues.

In the Javanese the number of Sanscrit words is about 100 in 1,000, in the Malay not more than 50, and in the Bugis of Celebes but 18. In the languages of the Philippines the number is little better than nominal, and they are all the same in proportion, and even the same identical words in all of them. Thus, in the Tagala, the vocabulary of which contains between 16,000 and 17,000 words, the Sanscrit terms amount to no more than 33, while in the Bisaya and Pampango dictionaries the proportion is nearly the same.

I may here adduce one singular example of the manner in which Sanscrit words have been transmitted from the Malay and Javanese languages to the Philippine tongues. The Philippine islanders seem to have but very partially adopted even the imperfect Hinduism of the Malays and Javanese. They named their chief deity Batala, which, with the exchange of one liquid for another, is the Batara of the Malays and Javanese. This, again, is the Avatara of the Sanscrit, the only alteration here consisting in the elision of the initial vowel and the exchange of one labial for another. In Sanscrit, the well-known word 'avatar' means literally 'a descent,' and, as applied to a deity, 'an incarnation.' In Malay and Javanese, however, it is an appellative confined to the

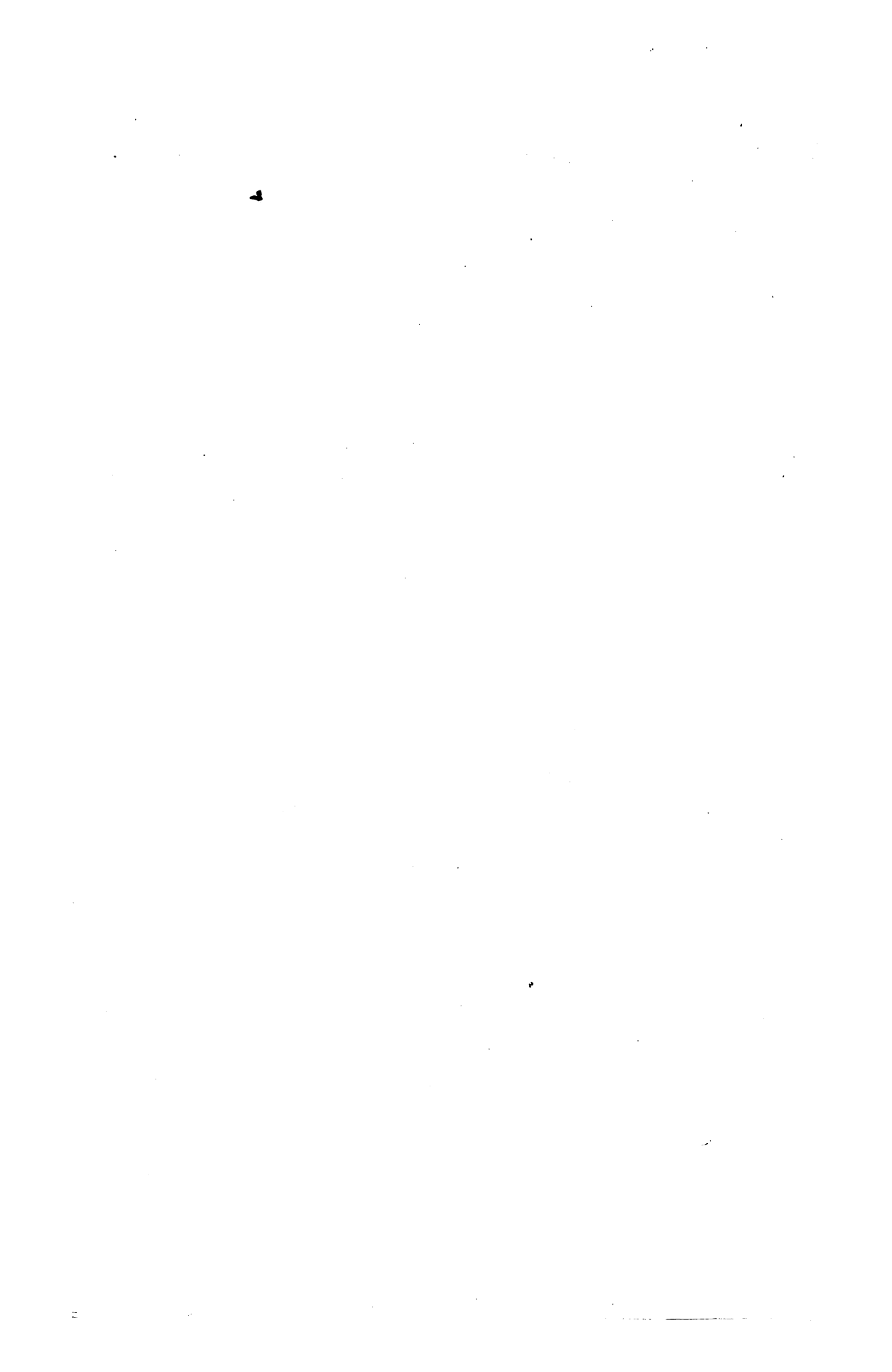
chief deities of the very populous Hindu Pantheon. Prefixed to the word 'guru' (teacher or spiritual guide), it is a title applied to the destroying power of the Hindu Triad—that is, to Siwa or Mahadewa, 'the great god,' for this deity was the chief object of the worship of the Malays and Javanese in their days of Hinduism. The Philippine islanders left out the word 'guru,' and when the first Spaniards asked the name of the chief deity of their worship, they gave, with a slight corruption, the Sanscrit word for 'a descent,' or 'incarnation.'

The image of the god thus worshipped under the name of a Hindu avatar is described by Pigafetta, the companion and secretary of Maghalaens, as he saw it in the island of Zebu, of which the language is the Bisaya. It was 'a wooden image, hollow within, having spread arms and legs, the feet turned upwards, the mouth with four tusks resembling those of a wild boar, and the whole figure daubed all over with paint.' The great navigator destroyed the image, baptised the people of Zebu, and gave them an image of the Infant Jesus, which, on the return of the Spaniards, sixty years afterwards, they found miraculously preserved by the relapsed natives; and it still exists in a convent of Zebu, known by the name which comes from the Avatar of the Hindus—namely, Batala, which was the only name for 'the Creator' which the language of the Philippines afforded.

What I have endeavoured to show in the course of this essay, and chiefly through the instrumentality of language, is that, contemporaneously with the discovery of the New World, there became known to civilised man an extensive region of the earth, in all essential points almost equally unknown to it. The principal race of man inhabiting this new region was peculiar, and as unknown as the man of America himself. In all respects, the most advanced people of this virtually new region had reached a higher social advancement than the Red man of America, for it had domesticated the larger quadrupeds,—cultivated several

cereals,—discovered the art of making iron malleable,—invented written language,—carried on an international intercourse, and at one or two points even maintained some beneficial communication with external nations.

The civilisations which sprang up among the Malayan race are obviously of independent native growth. In extent they are probably commensurate with the endowment of the race with which they originated, and, for aught we know to the contrary, may be of equal antiquity with the civilisations of Egypt or of India; for of their origin the only reliable testimony we can produce is the evidence afforded by the examination of language, for of any record of their past history the people themselves are as destitute, as are bees or beavers of the transactions of their predecessors. But for one race of man, endowed far beyond the rest, and whose enterprises, with few exceptions, were long confined to Europe, one-half of mankind would now be ignorant of the existence of the other half. It is through this superior race alone that they are held even in intercommunication.



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THE POLYNESIAN OR MAORI RACE OF MAN

AND

ITS PREHISTORIC CAREER.

BY

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THE POLYNESIAN OR MAORI RACE OF MAN,

AND

ITS PREHISTORIC CAREER.



ONE peculiar race of man, speaking the same language, inhabits all the islands of the Southern Pacific Ocean which lie east of the Fiji group—itsself inhabited by negroes—and all the islands from the equator to New Zealand inclusive. Besides the numerous islands within these wide bounds, all of which, except New Zealand, are intertropical, the same race, with the same language, inhabits a single group only of the Northern Pacific—the Sandwich, nearly under the Tropic of Cancer.

The distinctive physical characteristics of the race, whose geographical position is thus defined, have been best and most fully described by a recent writer, Dr. Thomson, when describing the New Zealanders,* and the following is an abstract of his account:—In stature the Polynesians, usually so called from their predominance in the Pacific, are nearly equal to Europeans, the average height of the male sex being about five feet six inches and a quarter, which is but three-quarters of an inch short of that of our own countrymen, estimating that at five feet seven inches. The tallest New Zealander that came under Dr. Thomson's notice was six feet five inches and a half high, which is close on the

*-'Story of New Zealand.' London: 1859.

stature of our own tallest men. In bodily weight and in girth of chest the New Zealanders are equal to Englishmen, their average weight amounting to ten stone avoirdupois.

The bodily shape of the Polynesians is peculiar, and the peculiarity consists in their having longer bodies and longer arms than Europeans of the same stature, but shorter lower limbs. The superior length of the arms occurs in the fore-arms, and the shortening of the legs in the space below the knees. This peculiarity of structure, although inconsiderable, yet makes a singular difference in the figure of the Polynesian and European, so that, even when in the same costume, there is no mistaking the one for the other. The feet of the Polynesians are short, broad, and the arch of the foot badly developed. Their hands are small and tapering. In walking they turn in their toes, take shorter steps, and move in narrower paths than Englishmen.

The hair of the head with the Polynesian is generally black, but some have hair with a rusty red tinge. A few have lank head-hair, and a few frizzly, but the majority have black hair with a slight wave in it. Their beards and whiskers, since the custom of extracting the hair has fallen into disuse, are occasionally considerable, but on the trunk it is scanty, and the Polynesians look with wonder at the hairy frames of Englishmen. The Polynesians have good teeth, which they do not deface or injure by any artificial custom. The nose is usually short and broad, with a low bridge, but some have elevated well formed noses of a Jewish form.

The complexion or colour of the skin of the Polynesians is of an olive-brown colour, not unlike that of a seasoned filbert; but it has many shades, some being so fair that blushes can be detected in their faces, while others are so dark that the tattoo marks are seen with difficulty. As to the countenance, the face is broad, the mouth large and coarse, and the upper lip long. There is no peculiarity in the position of the eye, but the white of it is less clear than

in the European. The pupil is dark and large, and the iris brown, but never grey or blue.

Dr. Thomson observes, that the size and darkness of the eyes of the New Zealanders—and the same observation must apply to the whole Polynesian race, which is unquestionably one and the same throughout—gives to their countenances an air of gravity. In youth this expression is generally open and happy; in middle age sleepy, morose, and thoughtful; while in the old it amounts to sadness. ‘The women,’ he observes, ‘are less handsome than the men, although the young are invariably pleasing. They have very long eye-lashes, and the habit girls have of casting them, as if from lassitude, over their bright restless eyes, throws into their faces an indescribable mildness, while their soft voices give a peculiar sweetness to their language. There is, indeed, a pathos about their voices when speaking—a plaintive pathos when allusions are made to persons dear to them, and an indifference and ease of manner unknown among many other races, which are alike charming to hear and pleasant to see.’

Dr. Thomson observes, that the Polynesians are not equal to Europeans, and more especially to Englishmen, in bodily strength and power of lasting exertion. ‘The extent of the inferiority,’ he says, ‘may be put down at fifty pounds weight; for, on a trial of strength, New Zealand men raised, on an average, 367 pounds an inch from the ground, and Englishmen 422 pounds. Considering how remarkably similar both races are in stature and bodily weight, such a result would not have been expected. . . . New Zealanders,’ he adds, ‘outstrip English settlers in running one hundred yards, but the latter leave the former far behind in a mile race.’

The inferiority of strength and power of endurance referred to in this case is found to exist in other races of man equally as in the Polynesian. Trained Hindu artillerymen, of at least equal stature with English, will fire shot for

shot for a quarter of an hour, but are quite beaten before half an hour has expired. Dr. Thomson ascribes the inferiority of the Polynesian to his potato diet; but this will not suffice, for a similar inferiority, although not to the same extent, is found in the Chinese, whose diet consists equally of animal food as that of Englishmen, and the difference is probably intrinsic and one of race.

When the Polynesians of the tropical islands were first seen and described by civilised man, they had reached a social position which removed them far above the category of mere savages. They had fixed abodes, cultivated roots and fruits; had domesticated the dog, the hog, and common fowl; were expert fishermen and mariners, and possessed the art of constructing powerful boats, in which they made long voyages from island to island. But they were ignorant of all the metals—even of gold, known to many savages of Africa and America. Their only cutting tools were of stone. They were, in fact, in the stone age—that era in the history of the progress of civilised nations, the only record of which is like the fossil remains of a previous organic world, to be found in caves and in the drift.

The Polynesians possessed no cereal or pulse; had no animal fit for labour, and no material from which to weave textile fabrics, their best clothing consisting of a paper made from the bark of an indigenous plant. Moreover, nearly cut off from all intercourse with strangers, from whom they might have derived improvement, it is difficult to imagine the Polynesians to have made any advancement beyond the condition in which they were first seen, for their means for progress had been exhausted.

So wide a geographical diffusion of one race of man speaking the same language as we find in the Polynesians is without example with a people so rude in any other part of the world; and perhaps the wide-spread of the early Greeks, although on a far narrower scale, makes the nearest approach

to it. This peculiarity owes its origin to the physical geography of the region which gave birth to the Polynesian race, and it may be presumed, in some degree, to the innate energy and enterprise of the race itself. The region consisted of groups of small islands, all within the tropics, and at no remote distance from one another. In this region the prevailing winds are, the north-east trade to the north of the equator, and the south-east, the main seat of the Polynesian nation to the south of it. But within a zone of eight or nine degrees of latitude along the equator, variable winds prevail, westerly ones being even more common than easterly. Within this zone strong gales are occasionally experienced, but cyclones are unknown, and it is best entitled to the epithet Pacific, which Magalhaens bestowed on the whole ocean, of which he had seen so little.

In small islands like those of the Pacific, destitute of beasts of the chase, the aboriginal inhabitants must of necessity have had recourse to the sea for subsistence, and thus, instead of becoming hunters, as in continents and large islands stocked with game, they became fishermen, dwelling on the coast, and in this state, pursuing at the same time a rude agriculture, the inhabitants of all the islands of the Pacific were found. From fishermen, they became, in process of time, mariners; and their agriculture yielding them a provision of food, they attained as high a measure of social advancement as was compatible with their opportunities, and with this advancement, like other races of man similarly situated, they undertook voyages of greater or less extent and made conquests.

That some intellectual superiority in the Polynesian race over its immediate neighbours existed is to be inferred from the fact that no such wide dissemination as theirs is found to exist with the latter. Thus, no such dissemination of the negro races of the Southern Pacific has taken place. On the contrary, these consist of several distinct races, each having

its own peculiar tongue, while all appear to occupy their own primordial seats, without ever going beyond them. It is the same with the race or races inhabiting the islands of the Northern Pacific, each group having its own peculiar language, without any one paramount tongue.

Of the capacity of the Polynesians to make voyages we have very satisfactory evidence. The inhabitants of the Friendly, the Society, and the Navigator groups perform voyages between these islands often extending to distances of 400 and 500 miles, encountering in the outward and homeward voyage every variety of wind with occasional tempests. Admiral Beechy picked up at sea a canoe belonging to Chain Island, a coral islet 300 miles to the east of Tahiti, to which it was subject. In her voyage to Tahiti she had been driven as far as Barrow Island, 600 miles out of her course, by two successive gales from the west. She had sailed from Chain Island, along with two other canoes, for the same destination, which had probably foundered in the gales. The crew and passengers of the canoe picked up consisted of twenty men, fifteen women, and ten children—in all forty-five persons—constituting in themselves a little colony, which might have settled a desert island had such a one been met with. We have here then a veritable instance of the manner in which the Polynesian race came to be so widely disseminated.

The Polynesian islanders had certainly acquired for rude men an extraordinary skill in navigation, and of this the form, size and management of their war canoes affords a striking example. The following is Dr. Thomson's graphic account of it:—'War canoes for sea navigation are eighty feet long, four feet broad, and four feet deep. Fifty paddlers sit on each side, and three fluglemen stand in the centre of the canoe, exciting the paddlers to exertion by their songs and actions. The crew on board war canoes kneel two and two along the bottom, sit on their heels, and wield paddles from four to five feet long. The steersman, sitting in the stern, has a paddle

nine feet long. Over tempestuous seas war canoes ride like sea-fowl. Should a wave throw a canoe on its side, and endanger its upsetting, the paddlers to windward lean over the gunwale, thrust their paddles deep into the wave, and by a curious action force the water under the canoe. This makes the vessel regain her equilibrium, and gives her a vigorous impulse forward. Even when a canoe is upset the crew can bale her out and put her right in the water.'

Had the land in which the Polynesian race and language now exist consisted, not of many little isles, but of one great one, or of portions of a continent, fertile, well-watered and stocked with animals amenable to domestication, no such wide dissemination as exists could assuredly have taken place. On the contrary, the people would be first hunters, and in due time become agriculturists, gradually making advances in the arts, and, finally, inventing letters, but naturally home-keeping and unadventurous, such as were the early Hindus, Egyptians, and Chinese.

As to language, it is certain that had the original land of the Polynesians been a tropical continent, and not many isles, instead of one language, over a wide geographical extent, they would certainly, although of one and the same race, have spoken a great many separate and distinct ones, as we find to be the case in Africa, in America, in Australia, and even in such large islands as Borneo and New Guinea, which in this respect may be considered of the nature of continents.

To determine the primordial seat of the tribe with which originated the now wide-spread Polynesian race and language—for such a locality there must inevitably have been—would be a matter of curiosity and instruction, but we have no means of accomplishing it. We may, however, be tolerably sure that the locality in question was not at the extremities of the existing limits of the race, that is, either in the Sandwich islands in the northern, or in New Zealand in the southern,

hemisphere. Most probably the primitive cradle was in one of the continuous groups of islands which lie between the tenth and twentieth degrees of south latitude, and which embrace fifty degrees of longitude. Over this long line, there exist stages of no great length, by which one race and language may have been spread without any extraordinary difficulty.

The main difficulty is in accounting for the dispersion of the Polynesian race and language to such places as Easter Island, between which and the continuous line of islands there is a wide gap of full 900 miles; to the Sandwich islands, between which and the Marquesas there is an interval of double that distance with hardly a single stepping stone; and to New Zealand, still more remote. The distance to New Zealand, of course, differs with the point we assume for departure, varying from 800 miles up to 2,000. The writers of the American voyage of circumnavigation, under Admiral Wilkes, fancy New Zealand to have been peopled from the Samoan or Navigator's island group, the adventurers proceeding by the route of the Island of Raratonga, at which they are supposed to have tarried for some generations. The people of Raratonga trace their origin, as do the New Zealanders, to an island called Hawaiki, but Hawaiki is unknown to geography, and no one can tell where it is or was. It is supposed, however, by the ethnologists of the American expedition, to be one of the Navigator islands. From the Navigator islands to Raratonga, the distance would not be less than 600 miles, and from Raratonga to the nearest point of the north island of New Zealand, it would not be less than 1,500 miles in a direct course, undoubtedly not the course which would be pursued by wandering barbarians, who knew not where they were going to, and only looking out for dry land to save them from drowning.

That the distant migrations now referred to, arose from the accidents of tempest-driven canoes, may be considered certain,

since we may be sure that voyages to remote regions, the very existence of which must have been unknown to the rude Polynesian fishermen, are out of the question. According to the people of Raratonga, the emigrants of the Navigator islands, in their route to New Zealand, arrived in their island twenty-nine generations ago; and reckoning a generation at the third part of a century, the time of the migration would carry us back between nine hundred and a thousand years, which would correspond to between the ninth and tenth century of our time.

The traditions of the New Zealanders give to their arrival in their new homes no more than twenty generations, which, reckoning as in the case of Raratonga, would carry us back near seven centuries, and make their arrival to correspond with the end of the twelfth or beginning of the thirteenth century, that is, about a century and a half after the Norman conquest of England. Of the time when the Polynesian invasion of the Sandwich islands took place even tradition is silent, but from the greater facility of the enterprise we may presume it to have been of an earlier date than that of New Zealand.

At the time when the migration, or more probably migrations now referred to, took place, the people engaged in them, we may conclude, must have been nearly in the same social condition in which they were when first seen by Europeans, and this condition is a fact of which we have satisfactory evidence. Voyages of such length as those they accomplished could not have been performed without a stock of lasting provisions, and therefore they must, at the time in which they were achieved, have cultivated such plants as the taro or esculent caladium, the yam, the batata, and, perhaps, the cocoa-nut palm. The adventurers must have even saved some of these, for they were found cultivating such of these as were suited to the climates of their adopted countries. Thus, all these plants were found in cultivation

in the Sandwich islands, while into the north island of New Zealand they had introduced the taro, the batata, and the yam, but not the coco palm unsuited to the climate. All the three domestic animals known in the Equatorial islands were introduced into the Sandwich group; but into New Zealand the dog only, and into Easter Island only the common fowl.

Even language bears evidence to the same effect. It is essentially the same throughout, and the languages of the Friendly, the Society, the Sandwich islands, and of New Zealand, differ less from one another than the Gaelic of Ireland differs from that of Scotland, or the Celtic of Wales from that of Brittany. All, as will presently be shown, contain the Malay element—the same proportion of it, and, indeed, even the same words in the same sense, evidences that the migrations had not taken place until after the establishment of an intercourse with the Malayan nations, and not until the Polynesian language had attained such maturity as it had reached when it first came under the notice of Europeans.

When we find so extensive a region as that under consideration inhabited solely by one and the same race of man, and that race speaking one and the same language, we must feel satisfied that migration alone could have brought about a phenomenon so unique among barbarians. An interesting question hence suggests itself: Were the many islands, now solely inhabited by the Polynesian race, desert and destitute of human inhabitants before they occupied them, or were they inhabited by an aboriginal population, either extirpated or absorbed by the invaders? I think the answer is in favour of the last of these alternatives, and the reasons in its favour are obvious, and I give, therefore, the most important of them.

In the first place, it is in favour of this assumption that no such extensive portion of the earth's surface as the one

in question has ever been found destitute of an aboriginal population. Thus, all the lands lying nearest to the region in question, and most resembling it in climate and animal and vegetable products, have their aboriginal human inhabitants, speaking, not one, but many separate and independent tongues. The different islands of the Malayan and Philippine Archipelagos, even the smallest, if capable of furnishing human sustenance, are all peopled, and even where the race is the same, the languages are usually different. So it is also with the islands of the Northern Pacific. The islands of the Southern Pacific, peopled by negroes from New Guinea to the Fiji group, in the same latitudes as the Tropical islands, inhabited by the Polynesian race, are, one and all, over a line of fifty degrees of longitude, peopled by various distinct races of negroes, speaking many different languages, who have not only not migrated themselves, but have even been occasionally invaded and settled in by the Polynesians.

Australia furnishes another example. It had its aboriginal inhabitants, and there seems no good reason for supposing that nature did not also furnish aborigines to New Zealand, which is but 1,200 miles distant from it, and has the same climate with a large portion of it. It may be said, indeed, that New Zealand was destitute of mammals to furnish human food; but in this respect it was not only no worse off than the Tropical islands inhabited by the Polynesians, where the hog and dog were most probably but recent acquisitions from abroad, while in New Zealand great Struthian birds supplied the place of quadrupeds, and these must have been more easily captured for food than the quadrupeds of Australia, the proof of which is, that most of them had for generations before the advent of Europeans been exterminated. It is true that, before the arrival of the Polynesian emigrants, the supposed aborigines of New Zealand could have had no other vegetable food than the root of an esculent fern (*Pteris esculenta*); but even in this matter

they were better off than the Australians; while both the aborigines of Australia and of New Zealand were better off than the Esquimaux, who could exist without any vegetable food at all, making animal oil to supply its place.

Of direct evidence in favour of the theory of an extermination or absorption of an aboriginal population in New Zealand by the intrusive Polynesians, it is, of course, impossible to produce satisfactory testimony. The conduct, however, of the Maories themselves, towards the inhabitants of the Chatham islands, may be quoted in illustration of that which the first invaders may be supposed to have pursued towards the aborigines of New Zealand, if such there were. The Chatham islands lie about 500 miles east of the south island of New Zealand, and according to an excellent paper, in the fourth volume of our Transactions, by Mr. W. Travers, little more than thirty years ago, while the Maories were still inveterate cannibals, 'the islands were invaded in 1832 or 1835 by the New Zealanders, by whom numbers of their inhabitants were killed and eaten. In fact, the expedition of the New Zealanders may be said to have been undertaken solely for the latter purpose, a Maori who happened to have visited the islands as a seaman in a vessel trading from Sydney having reported the aborigines as a plump well-fed race, who would fall easy victims to the prowess of his countrymen. By a refinement of cannibal cruelty, the unfortunate Chatham islanders, it is alleged, were compelled to carry the wood and prepare the ovens in which they were themselves to be cooked.' These cannibal feasts ceased only about twenty-five years ago, through the interference of British settlers. The islands are now a British possession, and the Maori immigrants are their principal inhabitants.

Mr. Travers thus describes the Chatham aborigines, and his description would seem to make them a race distinct from the Polynesian: 'They are much shorter, but stouter built than the New Zealanders, and have darker skins, but the same

straight coarse hair. Their faces are rounder and more pleasing in expression. Their noses are Roman in shape, resembling those of the Jews.' The Moe-ore, for that is the name by which the Chatham islanders are called, seem to have had an original language of their own; but that which is now spoken by them is a mixture of this and that of their conquerors, the Maories. The Polynesian practice of tattooing was unknown to them, and instead of canoes they had only rafts; a fact which would seem to show that they were at least not immigrants.

The number of the Chatham islanders, when invaded by the New Zealanders, was computed at 1,500, and they have been reduced, exclusive of a few that are slaves to the Maories, to some 200, and seem to be dying out, or to be in course of absorption by the invaders.

Here, then, we have an example of an island more out of the way of the rest of mankind than even New Zealand, yet inhabited by a peculiar race of man, with a peculiar language, and it is difficult to imagine that the larger and more favoured islands of the Southern Pacific should have been without aboriginal inhabitants before the arrival of the Polynesians, or, in other words, until chance brought them inhabitants.

Dr. Thomson gives a classification of the New Zealanders according to the colour of the skin and texture of the hair of the head which I have never seen before, but which is very instructive as regards the subject now under consideration. 'Out of one hundred persons,' he says 'that eighty-seven have brown skins, with black lank hair; that ten have reddish-brown skins, with short frizzly or long straight hair, having a rusty red tinge in it; and that three have black skins, with dark frizzly hair, which does not, however, spread over the head as in African negroes, but grows in tufts which, if allowed to join, twist round each other and form spiral ringlets.'

Dr. Thomson tells us that the chiefs are generally brown coloured, occasionally reddish, and rarely black ; and that among some tribes the black coloured are more numerous than among others. Now, the two first classes do not seem materially to differ from the ordinary Polynesian of the Tropical islands, but the black class is very remarkable, for the complexion and texture of the hair are those properties which especially belong to the Austral negroes, and which chiefly distinguish them from every other race of man. Is it not then probable that the fraction of the Maories, distinguished thus by hair and complexion may, with more or less of Polynesian blood, be the descendants of the aboriginal population which escaped the extermination of the Polynesian invaders ?

From the considerations now adduced, I think we may fairly conclude that the wide region now solely occupied by the Polynesian race had, before their invasion, their own aboriginal inhabitants, and these, as in other parts of the world, divided into many nations or tribes, speaking many different languages.

The only people who held any intercourse with the inhabitants of the islands of the Pacific before their discovery by the nations of Europe were the Malayan race; and the only evidence for this is language, but it is sufficient. In all the dialects of the Polynesian language there exist some Malayan words, the number of which does not exceed a hundred. These words belong to the two most cultivated tongues of the Malayan Archipelago—the Malay and Javanese—sometimes belonging exclusively to one or other of these languages, but more frequently common to both of them.

An examination of the words borrowed by the Polynesian language will explain the nature of the intercourse. Among the plants cultivated by the Tropical Polynesians, the names for the yam, the cocoa-palm, and the sugar-cane, are clearly traceable to the Malayan languages, while those of the

batata, the taro, the bread-fruit, and the orange are not so, but native words. For the three first plants, then, the inference is that the Polynesians were indebted to the Malaysans, but that the remainder are indigenous. We may further conclude that all these plants had been long cultivated, since they had sported into many varieties—the bread-fruit, for example, into five, and the banana into no fewer than eight-and-twenty. It may indeed have been, in so far as regards the plants, which I suppose to have been exotic, that the Malaysans did no more than instruct the native inhabitants in the manner of cultivating them; but even in this case, their Malayan names are evidences of a Malayan intercourse.

Of the three domestic animals of the Polynesians not one is called by a Malayan name; nor, indeed, is it likely that they could have been transported in the long voyage, made in prahns, of the fifty degrees of longitude which lie between Java and Tonga, the nearest of the Polynesian-inhabited islands. It is remarkable that, while the special name for the common fowl, the moa, given to the struthian birds by the Polynesian emigrants of New Zealand, is purely a native word, the generic term for fowl or bird in all the Polynesian dialects is genuine Javanese, namely, *manuk*, with the loss only of the final consonant, not pronounceable by a Polynesian.

Of terms connected with the arts, the following are clearly from the Malayan languages:—thatch, adze, comb, plank or board, the point or edge of a tool or weapon, the mesh of a net, to scrape, and to dig or delve.

In the Polynesian language, there are several Malayan terms connected with navigation, as that for water, in the sense of a river. Looking over Mr. Arrowsmith's map of New Zealand, I find this word, which is 'we' or 'wai' in old Javanese, in combination with other Malayan words, in seven different instances, as the name of different rivers.

Thus we have Wai-tangi, in the original We-tangis, literally river of weeping or lamentation, and Wai-rau, in the original We-avau, river of the cassaarina trees. In the class of words connected with navigation may be included the sky or heavens, the wind's eye, and perhaps the term for year; the names for sea or salt water, for dry land, for the mouth or embouchure of a river, and for country or region. But the names for canoe, for oar, for mast, and for sail are native words.

Of miscellaneous terms we have a good many, such as fruit, flower, leaf, feather, nose, pupil of the eye, the liver, the ear, a house-fly, a house, to bury, to roast, to dance, to die, to join, to drink, and to sin; even two of the personal pronouns are Malayan. Such words as these imply, on the part of the Polynesians, a considerable intimacy with Malay immigrants; but it is to be observed that, in many cases, they are only synonyms of native words, such as the names for parts of the body, which can only be foreign words that have superseded native ones.

Small as the proportion of Malayan words in the language of the Polynesians is, it is yet quite sufficient to prove that a considerable amount of intercourse, and that of considerable duration, had, at one time, existed between the two races.

But the most remarkable class of words which the Polynesians have borrowed from the Malayan nations are the numerals. Judging by other races of man, a people in the state of society which the Polynesians must have been in before their intercourse with the Malays, they would have counted no higher than the fingers of one or, at most, of two hands. But they have adopted the Malay numerals, and reckon in them up to one hundred; and they had done this before their most distant migrations, for they equally exist in the dialects of the Sandwich and New Zealand islands as in those of the Society and Friendly groups.

We have negative evidence of the antiquity of the Malayan

connection in the fact that, among the Malayan words which occur in the Polynesian, no vestige is to be found of the Sanskrit element, which exists even in the popular Malay and Javanese languages. We even find them in the short vocabulary of Pigafetta, the secretary and companion of Magalhaens, collected now near three centuries and a half ago, and the earliest specimen we possess of a Malayan tongue.

But in what manner did the Malayan nations find their way to the remote islands of the Pacific, the nearest of which to Java and Sumatra, the native seats of the borrowed words, are, in a straight line, at least 3,000 miles distant? We have, of course, no record of the adventures which took them there, and language alone testifies to their presence. When the nations of Europe first visited the Malayan Archipelago, they found its carrying trade in the hands of the Malays and Javanese, who pushed their adventures to the north as far as the Philippines, and to the south as far as New Guinea. The voyage from the first of these localities to the nearest of the islands of the Northern Pacific, the many languages of all of which contain an infusion of Malayan words equally with the Polynesian, does not exceed 500 miles. The voyage to the Polynesian islands of the Southern Pacific would be of far greater length, not short of 2,000 miles; for the long chain of the negro-inhabited islands, from their unsocial character, would, generally, have to be avoided, although these also may have been occasionally touched at by the adventurers for wood and water. A portion of this voyage is even now performed by the people of Celebes in pursuit of the holothurion fishing on the coast of Australia. The large, powerful, and well-equipped pirate prahns of the present day—and such existed when the Malayan nations came first to the knowledge of Europeans—are quite equal to the performance of such distant voyages, and are, in fact, yearly performing them within the waters of the Archipelago itself, in cruises which often last for two and three years.

It was, then, most likely through these rovers that the intercourse between the Malayan nations and the Polynesian islanders took place. The north-west monsoon would carry these rovers into that zone along the equator in which variable winds and calms prevail, and enable them to pursue their course in an easterly direction. More skilful and better armed than the rude natives, there would be no risk of their being destroyed by the latter, and an intercourse convenient to both parties would come to be established. Meeting with a congenial climate, the rovers might settle in the islands, and, intermarrying with the natives, they would soon be absorbed in the mass of the indigenous population, leaving a few words of their languages the only record of their presence.

Two questions naturally here suggest themselves: At what time did the Malayan immigration which I am supposing take place, and what benefit did the Polynesians derive from it? The only reply I can give to the first question is that the intercourse must be of considerable antiquity, for it took place before the Tropical Polynesians migrated to the Sandwich islands and New Zealand, since the dialects of these places, equally with the dialect of the Tropical islands, contain the same Malayan words in the same senses. Taking the emigration from the Samoan group at thirty generations up to the present, the time would carry us back about 1,000 years.

The answer to the second question is not difficult. The Malayan settlers, supposing they were themselves, at the time of their migration, acquainted with cereals, domestic animals, the metals, the art of weaving textile fabrics, and a knowledge of letters, and most probably they were, introduced none of them to the knowledge of the Polynesians. The Malayan nations, however, it was who, most probably, introduced the cocoa palm, the yam and the sugar-cane, all of which could be preserved for propagation in a long

voyage. It is probable also that they introduced some improvements into Polynesian agriculture and architecture. Besides all this, they unquestionably taught them an improved system of numeration.

A very general opinion has prevailed that the Polynesians whom I have been describing are of one and the same race with the Malays, but there is no foundation for this hypothesis, and it is an error which merits refutation, for it has been urged so far as to make the Polynesians a mere colony of Malays. The Malayan and Polynesian people are, in fact, two separate and distinct races of man, and perhaps as different from each other as are either of them from the Red man of America, and this is a fact which can be easily established. The average stature of the male adult Polynesian, as already stated, is five feet six inches and a quarter, but that of the Malay is three and a quarter inches short of this. The average weight of the Polynesian is ten stone, while that of the Malayan is at least a stone short of it. The Malay has always a low snubby nose, while the nose of the Polynesian is always more elevated, rising not unfrequently to the Jewish form, one which no Malay or Javanese has ever possessed. Even allowing that in the colour of the skin, the texture of the hair of the head, and scantiness of beard, there is no material difference between the two races, still, this would not amount to much, for the same thing might equally be said of either of them when compared with the Red man of America.

But it is a supposed similarity of language more than resemblance of physical form which has misled Ethnologists into the false assumption of an identity of race. They find a very small number of words, but obtrusive ones to a stranger, such as the numerals, to be common to the Malayan and Polynesian languages, and they jump at once to the conclusion, not only that the two people are of one and the same race, but that one of them is the lineal descendant of

the other, although the theory would leave a large area of the earth's surface without inhabitants at all, until fortuitously peopled from the islands of Sumatra and Java.

Now the Malayan languages and the Polynesian language are separate and distinct tongues in phonetic character and structure, and the Polynesian can be spoken with great facility, omitting every word of the hundred words of Malay or Javanese which it contains, and with more ease than Spanish can be spoken without its Arabic, or Irish without its Latin element.

In the phonetic character of the Malayan and Polynesian languages there is a wide disagreement. The consonant sounds of the Malayan languages, for example, amount to twenty; while those of the dialects of the Polynesian range from seven to ten in number, or less than one-half of those of the languages from which the Polynesian is fancied to have sprang. The Polynesian, unless when mixed with a Negro language, has no sibilant, always present in the Malayan languages. The paucity of liquids is a singular characteristic of the Polynesian language. The Tahiti has *r* only, the Sandwich Island only *l*; the Maori and the Tonga only *r* and *w*, while the Marquisa has none at all. The Malayan languages have three liquids, *l*, *r*, and *w*, and use them as semi-vowels, or in combination with ordinary consonants. The Polynesian cannot do this; for in it every consonant whatsoever must be followed by a vowel, and no word can end in a consonant. So if a Malayan word terminates in a consonant when adopted in the Polynesian, either the consonant is silent, or a vowel affixed to it. With a system of articulate sounds, so restricted, it may readily be believed what havoc is made in the Polynesian language with all the foreign words which it adopts.

As to structure, the Polynesian language, like the Malayan tongues, is characterised by simplicity, that is, by a general absence of inflections; but the substitutions for these are

expressed by wholly different terms from those employed in the Malayan tongues. The widest difference exists in the form of the personal pronouns. The Malayan pronouns are not distinguishable as singular or plural, except by the use of an adjunct; but the Polynesian pronouns have no fewer than four plurals, expressed by changes in the form of the words, namely, a dual, a plural excluding the parties addressed or spoken of, a plural including these parties, and a general plural.

The facts now adduced will suffice to show that neither physical form or language affords any warrant for considering the Malayan and Polynesian people to be of the same race, but that, on the contrary, they are two clearly distinct races of man.

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